INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

February 20, 2004

TO: Interested Parties / Applicant

RE: Munster Steel Company, Inc. / 089-18431-00090

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-17-3-4 and 326 IAC 2, this approval is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER-MOD.dot 9/16/03

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February 20, 2004

Jeanne Demeter
Munster Steel Co., Inc.
9505 Calumet Avenue
Munster, Indiana 46321

Re: 089-18431-00090
First Minor Source Modification to:
Part 70 Permit No.: T089-4292-00090

Dear Ms. Demeter:

Munster Steel Co., Inc., was issued a Part 70 operating permit T089-4292-00090 on March 25, 2002, for a structural and miscellaneous steel fabricating plant. An application to modify the source was received on April 21, 2003. Pursuant to 326 IAC 2-7-10.5, the following emission units are approved for construction at the source:

(d) One (1) Pangborn blast machine, identified as #1 Blast and constructed in 2002, with a maximum abrasive input of 120,000 pounds of black beauty per hour, controlled by a dust collector (#2 BDC), and venting inside the building.

(e) One (1) plasma/oxy-fuel drill machine, identified as #3 OFD and constructed in 2002, with a maximum cutting rate of 600 inches per hour for 2 inches thick steel, controlled by a dust collector (#4 TD), and venting inside the building.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

2. This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

6. Pursuant to 326 IAC 2-7-10.5(l), the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

This minor source modification authorizes construction of the new emission units. Operating conditions shall be incorporated into the Part 70 operating permit as a significant permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12. Operation is not approved until the significant permit modification has been issued.

Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Yu-Lien Chu, ERG,1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7871 to speak directly to Ms. Chu. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original Signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

Minor Source Modification Permit
Technical Support Document (TSD)

ERG/YC

cc: File - Lake County
Lake County Health Department
Northwest Regional Office
Air Compliance Section Inspector - Rick Massoels
Compliance Data Section - Lynetta Brown-Glover
Administrative and Development -Sara Cloe
Technical Support and Modeling - Michele Boner

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PART 70 OPERATING PERMIT
OFFICE OF AIR QUALITY

Munster Steel Co., Inc.
9505 Calumet Ave.
Munster, Indiana 46321

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T089-4292-00090	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: March 25, 2002 Expiration Date: March 25, 2007

First Minor Source Modification No.: MSM 089-18431-00090	Page Affected: 2, 4, 7, 8, 9, 10
Issued by: Original Signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: February 20, 2004

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary structural and miscellaneous steel fabricating plant.

Responsible Official:	President
Source Address:	9505 Calumet Ave., Munster, Indiana 46321
Mailing Address:	9505 Calumet Ave., Munster, Indiana 46321
General Source Phone Number:	(219) 924-5198
SIC Code:	3441
County Location:	Lake
Source Location Status:	Nonattainment for SO_2 and ozone Attainment for all other criteria pollutants
Source Status:	Part 70 Permit Program Minor Source, under PSD and Emission Offset Rules; Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

(a) One (1) paint booth, coating structural steel, constructed in 1960, with a maximum capacity of 12.0 gallons of coating per hour, utilizing airless spray, with no control;

(b) One (1) welding/flame-cutting operation, constructed in 1972, consisting of three (3) submerged arc welding stations with a maximum capacity of 18 inches of wire per minute, four (4) metal inert gas welding stations with a maximum hourly capacity of 22 inches of wire per minute; seventeen (17) stick welding stations with a maximum of 40 electrodes per hour, and one (1) propane flame-cutting station with a maximum cutting rate of 12 inches per minute;

(c) One (1) blasting operation, originally constructed in 1970 using sand as the abrasive, modified in 1987 to use Black Beauty Grit, with a nozzle internal diameter of 0.5 inches and a nozzle pressure of 100 pounds per square inch, with a throughput of 2,044 pounds per hour, and no control.

(d) One (1) Pangborn blast machine, identified as #1 Blast and constructed in 2002, with a maximum abrasive input of 120,000 pounds of black beauty per hour, controlled by a dust collector (#2 BDC), and venting inside the building.

(e) One (1) plasma/oxy-fuel drill machine, identified as #3 OFD and constructed in 2002, with a maximum cutting rate of 600 inches per hour for 2 inches thick steel, controlled by a dust collector (#4 TD), and venting inside the building.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source does not currently have any insignificant activities, as defined in 326 IAC 2-7-1(21).

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(a) One (1) paint booth, coating structural steel, constructed in 1960, with a maximum capacity of 12.0 gallons of coating per hour, utilizing airless spray, with no control;

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 PSD Minor Limit [326 IAC 2-2]

The solids content of the coatings, primers, thinners, and cleaners inputted to the paint booth shall be limited to less than two hundred (200) tons per twelve (12) consecutive month period with compliance determined at the end of each month. This is equivalent to limiting the particulate emissions, both PM and PM10, from the paint booth to less than fifty (50) tons per year.

This requirement and the requirement in Condition D.2.2 limit particulate emissions such that when including the particulate emissions from the other units at the source, the total source emissions remain below two hundred fifty (250) tons per year. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) are not applicable.

D.1.2 Emission Offset Minor Limit [326 IAC 2-3]

The VOC content of the coatings, primers, thinners, and cleaners inputted to the paint booth shall be limited to less than twenty-four and five-tenths (24.5) tons per twelve (12) consecutive month period. This limit is structured such that when including the VOC emissions from combustion, the source total VOC emissions remain below twenty-five (25) tons per year. Therefore the requirements of 326 IAC 2-3 (Emission Offset) are not applicable.

D.1.3 Particulate Matter (PM) [326 IAC 6-1-2(a)]

Pursuant to 326 IAC 6-1-2(a) (Nonattainment Area Particulate Limitations), particulate matter (PM) emissions from the paint booth shall be limited to 0.03 grain per dry standard cubic foot.

D.1.4 VOC Requirements [326 IAC 8-7]

326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark, and Floyd Counties) applies to this source because the source is in Lake County and the coating facility at the source has the potential to emit greater than ten (10) tons per year of VOC. However, as specified in 326 IAC 8-7-2(b), no emissions standards or limitations exist because the paint booth would be subject to 326 IAC 8-2, but actual emissions are below the applicability levels of the rules. Certification, record keeping, and reporting requirements do apply to this source and they are listed in the Record Keeping and Reporting Requirements section of this permit.

D.1.5 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), does not apply to this source because its actual emissions are below fifteen (15) pounds per day.

Any change or modification which may increase the actual emissions of VOC to above fifteen (15) tons per twelve (12) consecutive month period must be approved by the Office of Air Quality before any such change may occur.

D.1.6 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and any control devices.

Compliance Determination Requirements

D.1.7 Volatile Organic Compounds (VOC)

Compliance with the VOC content and usage limitations contained in Condition D.1.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer.

D.1.8 VOC Emissions

Compliance with Condition D.1.2 shall be demonstrated within 30 days of the end of each month based on the total volatile organic compound usage for the twelve (12) month period.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.9 Monitoring

(a) Monthly inspections shall be performed of the coating emissions and the presence of overspray on the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(b) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.10 Record Keeping Requirements

(a) To document compliance with Conditions D.1.1, D.1.2, and D.1.5 the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the PM, PM10 and VOC usage limits and/or the PM, PM10, and VOC emission limits established in Conditions D.1.1, D.1.2, and D.1.5. (Assume PM and PM10 are equal).

(1) The amount and VOC and solids content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;

(2) A log of the dates of use;

(3) The cleanup solvent usage for each month;

(4) The total VOC and solids usage for each month; and

(5) The weight of VOCs and particulates emitted for each compliance period.

(b) To document compliance with Condition D.1.9, the Permittee shall maintain a log of monthly overspray observations and those additional inspections prescribed by the Preventive Maintenance Plan.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.11 Reporting Requirements

(a) A quarterly summary of the information to document compliance with Conditions D.1.1 and D.1.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) To document compliance with 326 IAC 8-7-6, the source shall submit to the department a certification that the paint booth is exempt from the requirements of 326 IAC 8-7-3. The certification shall contain all of the following information:

(1) The name and address of the source and the name and telephone number of the company representative.

(2) Identification of each VOC emitting facility together with a description of the purpose each facility serves.

(3) A listing of facilities which meet the requirements of 326 IAC 8-7-2(a).

(4) Baseline actual emissions for each facility identified in subdivision (3) together with the following information:

(A) Maximum design rate, maximum production, or maximum throughput.

(B) VOC emission factors with reference to the source of the emission factors and procedures as to how the emission factors were estimated, for example, the type of each fuel or process chemicals used and the baseline year used.

(5) Procedures that will be used to monitor the source's potential emissions to ensure that they remain below twenty-five (25) tons per year.

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(b) One (1) welding/flame-cutting operation, constructed in 1972, consisting of three (3) submerged arc welding stations with a maximum capacity of 18 inches of wire per minute, four (4) metal inert gas welding stations with a maximum hourly capacity of 22 inches of wire per minute; seventeen (17) stick welding stations with a maximum of 40 electrodes per hour, and (1) propane flame-cutting station with a maximum cutting rate of 12 inches per minute;

(c) One (1) blasting operation, originally constructed in 1970 using sand as the abrasive, modified in 1987 to use Black Beauty Grit, with a nozzle internal diameter of 0.5 inches and a nozzle pressure of 100 pounds per square inch, with a throughput of 2,044 pounds per hour, and no control.

(d) One (1) Pangborn blast machine, identified as #1 Blast and constructed in 2002, with a maximum abrasive input of 120,000 pounds of black beauty per hour, controlled by a dust collector (#2 BDC), and venting inside the building.

(e) One (1) plasma/oxy-fuel drill machine, identified as #3 OFD and constructed in 2002, with a maximum cutting rate of 600 inches per hour for 2 inches thick steel, controlled by a dust collector (#4 TD), and venting inside the building.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Particulate Matter (PM) [326 IAC 6-1-2(a)]

Pursuant to 326 IAC 6-1-2(a)(Nonattainment Area Particulate Limitations), particulate matter (PM) emissions from the listed facilities shall be limited to 0.03 grain per dry standard cubic foot.

D.2.2 PSD Minor Limit [326 IAC 2-2]

The PM and PM10 emissions from the Pangborn blast machine (#1 Blast) and the plasma/oxy-fuel drill machine (# OFD) shall not exceed the emission limits listed in the table below:

Units	PM Emission Limit (lbs/hr)	PM10 Emission Limit (lbs/hr)
Pangborn Blast Machine	1.5 lbs/hr	1.5 lbs/hr
Plasma/Oxy-fuel Drill Machine	0.1 lbs/hr	0.1 lbs/hr

This is equivalent to 7.0 tons/yr of PM/PM10 emissions. Combined with Condition D.1.1 and the PM/PM10 emissions from other units, the PM/PM10 emissions from the entire source are limited to less than 250 tons per year. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and are not applicable.

D.2.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

Compliance Determination Requirements

D.2.4 Particulate Matter (PM)

In order to comply with Condition D.2.1 and D.2.2, the dust collector for PM control shall be in operation and control emissions from the Pangborn blast machine (#1 Blast) and the plasma/oxy-fuel drill machine (#3 OFD) at all times that Pangborn blast machine (#1 Blast) and the plasma/oxy-fuel drill machine (#3 OFD) are in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.2.5 Visible Emissions Notations

(a) Once per shift visible emission notations of the Pangborn blast machine (#1 Blast) and the plasma/oxy-fuel drill machine (#3 OFD) stack exhausts shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.2.6 Parametric Monitoring

The Permittee shall record the total static pressure drop across the dust collectors used in conjunction with the Pangborn blast machine (#1 Blast) and the plasma/oxy-fuel drill machine (#3 OFD), at least once per shift when the Pangborn blast machine (#1 Blast) and the plasma/oxy-fuel drill machine (#3 OFD) are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the dust collector is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure drop shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.2.7 Baghouse Inspections

An inspection shall be performed each calender quarter of all bags controlling the Pangborn blast machine (#1 Blast) and the plasma/oxy-fuel drill machine (#3 OFD) when venting to the

atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

D.2.8 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Implementation, Preparation, Records, and Reports, shall be considered a violation of this permit.

(b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.9 Record Keeping Requirements

(a) To document compliance with Condition D.2.5, the Permittee shall maintain records of once per shift visible emission notations of the Pangborn blast machine (#1 blast) and the plasma/oxy-fuel drill machine (#3 OFD) stack exhausts.

(b) To document compliance with Condition D.2.6, the Permittee shall maintain once per shift records of the inlet and outlet pressure drop during normal operation when venting to the atmosphere.

(c) To document compliance with Condition D.2.7, the Permittee shall maintain records of the results of the inspections required under Condition D.2.7 and the dates the vents are redirected.

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Minor Source Modification and a Part 70 Significant Permit Modification

Source Background and Description

Source Name:	Munster Steel Co., Inc.
Source Location:	9505 Calumet Ave., Munster, Indiana 46321
County:	Lake
SIC Code:	3441
Operation Permit No.:	T089-4292-00090
Operation Permit Issuance Date:	March 25, 2002
Significant Permit Modification No.:	089-17252-00090
Minor Source Modification No.:	089-18431-00090
Permit Reviewer:	ERG/YC

The Office of Air Quality (OAQ) has reviewed a modification application from Munster Steel Co., Inc., relating to the operation of the following emission units and pollution control devices:

(d) One (1) Pangborn blast machine, identified as #1 Blast and constructed in 2002, with a maximum abrasive input of 120,000 pounds of black beauty per hour, controlled by a dust collector (#2 BDC), and venting inside the building.

(e) One (1) plasma/oxy-fuel drill machine, identified as #3 OFD and constructed in 2002, with a maximum cutting rate of 600 inches per hour for 2 inches thick steel, controlled by a dust collector (#4 TD), and venting inside the building.

History

On April 21, 2003, Munster Steel Co., Inc. submitted an application to the OAQ requesting to add a Pangborn blast machine (#1 Blast) and a plasma/xyo-fuel drill machine (#3 OFD) with dust collectors for control to their Title V permit. These units were constructed in 2002 and started operating in 2002 without getting an air approval. The source also requested to remove the existing wheelabrator shot-blaster because this unit was replaced by the new Pangborn blast machine.

Munster Steel Co., Inc. is an existing structure and miscellaneous steel fabricating plant. A Part 70 Permit (T089-4292-00090) was issued to this source on March 25, 2002. The existing source is a PSD minor source with PM and PM10 emissions each limited to less 250 tons/yr and the actual PM/PM10 emissions from the entire source have never exceeded 100 tons/yr. The source would like to maintain their PSD minor source status. Therefore, the PM/PM10 emissions for the existing units will be adjusted so that the PM/PM10 emissions from the entire source are still limited to less than the 250 tons/yr after this modification.

Enforcement Issue

(a) IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit.

(b) IDEM is reviewing this matter and will take appropriate action. This proposed approval is intended to satisfy the requirements of the construction permit rules.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
#1	Dust Collector #2 BDC	15.3	0.5	unknown	70
#2	Dust Collector #4 TD	16.0	0.5	unknown	unknown

Recommendation

The staff recommends to the Commissioner that the Part 70 Minor Source Modification and the Part 70 Significant Permit Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on April 21, 2003. Additional information was received on May 15, 2003.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (pages 1 and 2).

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	5,307
PM-10	3,730
SO_2	--
VOC	--
CO	--
NO_x	–

HAP's	Potential To Emit (tons/year)
Manganese	0.16
Nickel	0.03
Chromium	0.09
TOTAL	0.28

Justification for Modification

This modification is being performed through a Part 70 Minor Source Modification pursuant to 326 IAC 2-7-10.5(d)(5)(C) as the potential to emit PM and PM10 is each limited to less than 25 tons per year by using dust collectors with at least 99% control efficiencies and no visible emissions. This modification is being performed through a Part 70 Significant Permit Modification pursuant to 326 IAC 2-7-12(d) because the source is seeking to establish Part 70 permit conditions to make the 326 IAC 2-2 (PSD) requirements not applicable.

County Attainment Status

The source is located in Lake County.

Pollutant	Status
PM-10	Moderate Nonattainment*
SO_2	Primary Nonattainment
NO_2	Attainment
Ozone	Severe Nonattainment
CO	Maintenance Attainment
Lead	Attainment

*Note: Lake County has been federally redesignated in 40 CFR 81.315 as attainment for PM10. The Air Pollution Control Board will be making the same redesignation in the state rules.

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Lake County has been designated as severe nonattainment for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

(b) Lake County has been designated as nonattainment for SO_2. Therefore, SO_2 emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

(c) Part of Lake County has been designated as nonattainment for PM10. However, this source is located at Munster in Lake County, which was not included in the nonattainment area for PM10. Therefore, PM10 emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(d) Lake County has been classified as attainment for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(e) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	Less than 250
PM-10	Less than 250
SO_2	Negligible
VOC	Less than 25.0
CO	0.8
NOx	0.9

(a) This existing source is a not a PSD major stationary source because no attainment regulated pollutants (PM, PM10, CO, and NOx) is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

(b) This existing source is a not an Emission Offset major stationary source because VOC is not emitted at a rate of 25 tons per year or more and SO_2 is not emitted at a rate of 100 tons per year or more. This source is not in one of the 28 listed source categories.

(c) These emissions are based upon the Technical Support Document (TSD) for the source's Part 70 permit (T089-4292-00090), issued on May 25, 2002.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 permit modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	HAPs
Pangborn Blast Machine	Less than 6.57	Less than 6.57	--	--	--	--	--
Plasma/Oxy-fuel Drill Machine	Less than 0.44	Less than 0.44	--	--	--	--	0.28
Total Emission of This Modification	Less than 7.01	Less than 7.01	--	--	--	--	0.28
* Existing Paint Room	**Less than ~~149~~ **50.0**	**Less than ~~149~~ **50.0**	--	Less than 24.5	--	--	Less than 25.0
*Other Existing Units	100	100	Negligible	0.1	0.8	0.9	Negligible
Total Emissions of the Entire Source After Modification	Less than 157	Less than 157	Negligible	Less than 24.6	0.80	0.90	Less than 25.3

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	HAPs
PSD and Emission Offset Thresholds	250	250	100	25	250	250	NA

Note: (*)The PTE of the existing units are from the TSD of the source's Part 70 Permit (#089-4292-00090, issued on March 25, 2002).

(**) The source would like to maintain their PSD minor source status. Therefore, the PTE of PM/PM10 of the existing paint booth has been adjusted to less than 50 tons/yr.

(a) This modification to an existing minor stationary source is not major because the potential to emit from this unit is less than PSD and Emission Offset significant thresholds. In addition, the source will maintain their PSD minor and Emission Offset minor source status after this modification. Therefore, pursuant to 326 IAC 2-2 and 326 IAC 2-3, the PSD and Emission Offset requirements do not apply.

(b) The PM and PM10 emissions from the this modification project are each limited to less than 7.01 tons/yr. This is attained by the use of dust collectors to control the PM/PM10 emissions from the proposed blast machine and the drill machine.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this modification.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this modification.

(c) This modification does involve a pollutant-specific emissions unit (Pangborn blast machine):

(1) with the potential to emit before controls equal to or greater than one hundred (100) tons per year, and

(2) that is subject to an emission limit and has a control device that is necessary to meet that limit.

Therefore, the Pangborn blast machine in this modification is subject to 40 CFR Part 64 - Compliance Assurance Monitoring (CAM). Since the source's Part 70 permit application was filed and determined complete before April 20, 1998, the CAM plan for this unit shall be submitted with the first Part 70 permit renewal application and the CAM requirements will be included in the first Part 70 renewal permit.

State Rule Applicability - Entire Facility

326 IAC 2-3 (Emission Offset)

This existing source is located in Lake County (nonattainment area for Ozone and SO_2) and has potential to emit SO_2 less than 100 tons/yr. The VOC emissions from the existing source were limited to less than 25 ton/yr in the source's Part 70 permit (T089-4292-00090, issued on March 25, 2002). Therefore, this source is an existing Emission Offset minor source.

There is no SO_2 or VOC emissions from this modification. Therefore, the source will maintain the Emission Offset minor source status after this modification, and the requirements of 326 IAC 2-3 are not applicable.

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

This source was constructed in 1960 and modified in 1970, 1972, 1990 and 2002 (this modification). This source is not 1 of 28 source categories defined in 326 IAC 2-2-1(p)(1) and has PM/PM10 emissions before control greater than 250 tons/yr. Pursuant to the source's Part 70 permit (T089-4292-00090, issued on March 25, 2002), the PM and PM10 emissions from the entire source were each limited to less than 250 tons/yr. Therefore, the existing source is a PSD minor source.

The potential to emit PM/PM10 before control from this modification is greater than 250 ton/yrs. The source have accepted the following emission limits:

Units	PM Emission Limit (lbs/hr)	PM10 Emission Limit (lbs/hr)
Pangborn Blast Machine	1.5 lbs/hr	1.5 lbs/hr
Plasma/Oxy-fuel Drill Machine	0.1 lbs/hr	0.1 lbs/hr

This is equivalent to 7.0 tons/yr of PM/PM10 emissions. According to the emission calculations in Appendix A, the potential to emit PM/PM10 is less than the emission limits in the table above. Compliance with the emission limits above ensures that the PM/PM10 emissions from this modification are less than 250 tons/yr. Therefore, the requirements of 326 IAC 2-2 are not applicable to this modification.

Pursuant to Condition D.1.1 in the source's Title V permit (#089-4292-00090, issued on March 25, 2002), the solid content of the coatings, primers, thinners, and cleaners input to the paint booth shall be limited to less than 596 tons per twelve (12) consecutive month period, which is equivalent to 149 tons/yr of PM/PM10 emissions. The source proposed lower this solid content limit to less than 200 tons per twelve (12) consecutive month period, which is equivalent to 50 tons/yr of PM/PM10 emissions. Therefore, the potential to emit PM/PM10 emissions from the entire source after this modification will still be less than 250 tons/yr, and this source will maintain the PSD minor source status.

326 IAC 2-4.1 (New Sources of Hazardous Air Pollutants)

This source was constructed in 1960 and modified in 1970, 1972, 1990 and 2002 (this modification). The potential to emit HAPs from this modification is less than10 tons/yr for a single HAP and less than 25 tons/yr for any combination of HAPs. Therefore, the requirements of 326 IAC 2-4.1 are not applicable to this modification.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity for sources located in Lake County shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of twenty percent (20%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9

or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Pangborn Blast Machine (#1 Blast) and Drill Machine (#3 OFD)

326 IAC 6-1-2(a)(Nonattainment Area Particulate Limitations)

This source is located in Lake County, but is not one of the sources listed under 326 IAC 6-1-8.1 through 326 IAC 6-1-18. Therefore, the Pangborn blast machine (#1 Blast) and the drill machine (#3 OFD) are subject to the requirements of 326 IAC 6-1-2(a)(Nonattainment Area Particulate Limitations), and the PM emissions from the each of the proposed blast machine (#1 Blast) and the drill machine (#3 OFD) shall not exceed 0.03 grains per dry standard cubic foot (dscf) of exhaust air.

326 IAC 6-3 (Process Operations)

The Pangborn blast machine (#1 Blast) and the drill machine (#3 OFD) are subject to the requirements contained in 326 IAC 6-1-2(a)(Nonattainment Area Particulate Limitations). Therefore, these emission units are exempt from the requirements of 326 IAC 6-3, pursuant to 326 IAC 6-3-1(b)(1).

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

1. The Pangborn blast machine (#1 Blast) has applicable compliance monitoring conditions as specified below:

   (a) Visible emissions notations of the stack exhaust of the proposed blast machine (#1 Blast) shall be performed once per shift during normal daylight operations when venting to the atmosphere. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for

this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

(b) The Permittee shall monitor and record the pressure drop for the dust collector (#2 BDC) used in conjunction with the Pangborn blast machine (#1 Blast), at least once per shift when the Pangborn blast machine (#1 Blast) is in operation and venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the scrubber shall be maintained within the range of 3.0 to 6.0 inches of water, or a range established during the latest compliant stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside the above mention range.

(c) An inspection shall be performed each calendar quarter of all bags controlling the Pangborn blast machine (#1 Blast). Inspections required by this condition shall not be performed in consecutive months. Inspections are optional when venting indoors. All defective bags shall be replaced. All defective bags shall be replaced. In the event that bag failure has been observed:

(1) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit.

(2) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit.

These monitoring conditions are necessary because dust collector #2 BDC, which is equipped with the blast machine (#1 Blast), must operate properly to ensure compliance with 326 IAC 2-2 (PSD), and 326 IAC 6-1-2(a)(Nonattainment Area Particulate Limitations).

2. The plasma/oxy-fuel drill machine (#3 OFD) has applicable compliance monitoring conditions as specified below:

(a) Visible emissions notations of the stack exhaust of the drill machine (#3 OFD) shall be performed once per shift during normal daylight operations when venting to the atmosphere. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously “normal” means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

(b) The Permittee shall monitor and record the pressure drop for the dust collector (#4 TD) used in conjunction with the drill machine (#3 OFD), at least once per shift

when the drill machine (#3 OFD) is in operation and venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the scrubber shall be maintained within the range of 3.0 to 6.0 inches of water, or a range established during the latest compliant stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside the above mention range.

(c) An inspection shall be performed each calendar quarter of all bags controlling the drill machine (#3 OFD). Inspections required by this condition shall not be performed in consecutive months. Inspections are optional when venting indoors. All defective bags shall be replaced. All defective bags shall be replaced. In the event that bag failure has been observed:

(1) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit.

(2) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit.

These monitoring conditions are necessary because dust collector #4 TD, which is equipped with the drill machine (#3 OFD), must operate properly to ensure compliance with 326 IAC 2-2 (PSD), and 326 IAC 6-1-2(a)(Nonattainment Area Particulate Limitations).

Proposed Changes

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary structural and miscellaneous steel fabricating plant.

Responsible Official:	~~Ronald Robbins~~ **President**
Source Address:	9505 Calumet Ave., Munster, Indiana 46321
Mailing Address:	9505 Calumet Ave., Munster, Indiana 46321
General Source Phone Number:	(219) 924-5198
SIC Code:	3441
County Location:	Lake
Source Location Status:	Nonattainment for ~~SO2~~**SO_2** and ozone Attainment for all other criteria pollutants
Source Status:	Part 70 Permit Program Minor Source, under PSD and Emission Offset Rules; **Not 1 of 28 Source Categories**

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

~~(c) One (1) wheelabrator shot blaster, constructed in 1990, with a blast rate of 20,000 pounds per hour of steel shot, equipped with a dust collector to control particulate emissions; and~~

(~~d~~**c**) One (1) blasting operation, originally constructed in 1970 using sand as the abrasive, modified in 1987 to use Black Beauty Grit, with a nozzle internal diameter of 0.5 inches and a nozzle pressure of 100 pounds per square inch, with a throughput of 2,044 pounds per hour, and no control.

(d) One (1) Pangborn blast machine, identified as #1 Blast and constructed in 2002, with a maximum abrasive input of 120,000 pounds of black beauty per hour, controlled by a dust collector (#2 BDC), and venting inside the building.

(e) One (1) plasma/oxy-fuel drill machine, identified as #3 OFD and constructed in 2002, with a maximum cutting rate of 600 inches per hour for 2 inches thick steel, controlled by a dust collector (#4 TD), and venting inside the building.

D.1.1 PSD Minor Limit [326 IAC 2-2] ~~[40 CFR 52.21]~~

The solids content of the coatings, primers, thinners, and cleaners inputted to the paint booth shall be limited to less than ~~five hundred ninety-six (596)~~ **two hundred (200)** tons per twelve (12) consecutive month period **with compliance determined at the end of each month**. This is equivalent to limiting the particulate emissions, both PM and PM10, from the paint booth to less than ~~one hundred forty-nine (149)~~ **fifty (50)** tons per year.

This requirement and the requirement in Condition D.2.2 limit particulate emissions such that when including the particulate emissions from the other units at the source, the total source emissions remain below two hundred fifty (250) tons per year. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) ~~and 40 CFR 52.21~~ are not applicable.

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(b) One (1) welding/flame-cutting operation, constructed in 1972, consisting of three (3) submerged arc welding stations with a maximum capacity of 18 inches of wire per minute, four (4) metal inert gas welding stations with a maximum hourly capacity of 22 inches of wire per minute; seventeen (17) stick welding stations with a maximum of 40 electrodes per hour, and (1) propane flame-cutting station with a maximum cutting rate of 12 inches per minute;

~~(c) One (1) wheelabrator shot blaster, constructed in 1990, with a blast rate of 20,000 pounds per hour of steel shot, equipped with a dust collector to control particulate emissions; and~~

(~~d~~**c**) One (1) blasting operation, originally constructed in 1970 using sand as the abrasive, modified in 1987 to use Black Beauty Grit, with a nozzle internal diameter of 0.5 inches and a nozzle pressure of 100 pounds per square inch, with a throughput of 2,044 pounds per hour, and no control.

(d) One (1) Pangborn blast machine, identified as #1 Blast and constructed in 2002, with a maximum abrasive input of 120,000 pounds of black beauty per hour, controlled by a dust collector (#2 BDC), and venting inside the building.

(e) One (1) plasma/oxy-fuel drill machine, identified as #3 OFD and constructed in 2002, with a maximum cutting rate of 600 inches per hour for 2 inches thick steel, controlled by a dust collector (#4 TD), and venting inside the building.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

D.2.2 PSD Minor Limit [326 IAC 2-2] ~~[40 CFR 52.21]~~

~~Both PM and PM10 emissions, from the wheelabrator shall not exceed 0.1 ton per year each (0.023 lb/hr).~~

The PM and PM10 emissions from the Pangborn blast machine (#1 Blast) and the plasma/oxy-fuel drill machine (# OFD) shall not exceed the emission limits listed in the table below:

Units	PM Emission Limit (lbs/hr)	PM10 Emission Limit (lbs/hr)
Pangborn Blast Machine	**1.5 lbs/hr**	**1.5 lbs/hr**
Plasma/Oxy-fuel Drill Machine	**0.1 lbs/hr**	**0.1 lbs/hr**

This is equivalent to 7.0 tons/yr of PM/PM10 emissions. Combined with Condition D.1.1 and the PM/PM10 emissions from other units, the PM/PM10 emissions from the entire source are limited to less than 250 tons per year.

~~This requirement and the requirement in Condition D.1.1 limit particulate emissions (PM and PM10) such that when including the particulate emissions from the other units at the source, the total source emissions remain below two hundred fifty (250) tons per year.~~ Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) ~~and 40 CFR 52.21~~ are not applicable.

D.2.4 Particulate Matter (PM)

In order to comply with Condition D.2.1 and D.2.2, the dust collector for PM control shall be in operation and control emissions from the ~~wheelabrator shot-blaster~~ **Pangborn blast machine (#1 Blast) and the plasma/oxy-fuel drill machine (#3 OFD)** at all times that the ~~wheelabrator shot-~~

~~blaster~~ **Pangborn blast machine (#1 Blast) and the plasma/oxy-fuel drill machine (#3 OFD)** ~~is~~ **are** in operation.

D.2.5 Visible Emissions Notations

(a) Once per shift visible emission notations of the ~~wheelabrator~~ **Pangborn blast machine (#1 Blast) and the plasma/oxy-fuel drill machine (#3 OFD)** stack exhaust**s** shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

D.2.6 Parametric Monitoring

The Permittee shall record the total static pressure drop across the dust collector**s** used in conjunction with the ~~wheelabrator shot-blaster~~ **Pangborn blast machine (#1 Blast) and the plasma/oxy-fuel drill machine (#3 OFD)**, at least once per shift when the ~~wheelabrator shot-blaster~~ **Pangborn blast machine (#1 Blast) and the plasma/oxy-fuel drill machine (#3 OFD)** ~~is~~ **are** in operation when venting to the atmosphere. When for any one reading, the pressure drop across the dust collector is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.2.7 Baghouse Inspections

An inspection shall be performed each calender quarter of all bags controlling the ~~wheelabrator~~ **Pangborn blast machine (#1 Blast) and the plasma/oxy-fuel drill machine (#3 OFD)** when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. **Inspections required by this condition shall not be performed in consecutive months.** All defective bags shall be replaced.

D.2.9 Record Keeping Requirements

(a) To document compliance with Condition D.2.5, the Permittee shall maintain records of once per shift visible emission notations of the ~~wheelabrator shot-blaster~~ **Pangborn blast machine (#1 Blast) and the plasma/oxy-fuel drill machine (#3 OFD)** stack exhaust**s**.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Munster Steel Co., Inc.
Source Address: 9505 Calumet Ave., Munster, Indiana 46321
Mailing Address: 9505 Calumet Ave., Munster, Indiana 46321
Part 70 Permit No.: T089-4292-00090
Facility: Paint Booth
Parameter: Solids content
Limit: The source shall limit the solids content of the coatings, primers, thinners, and cleaners inputted to the paint booth to less than ~~five hundred ninety-six (596)~~ **two hundred (200)** tons per twelve (12) consecutive month period **with compliance determined at the end of each month**. This is equivalent to limiting the particulate emissions from the paint booth to less than ~~one hundred forty-nine (149)~~ **fifty (50)** tons per year.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

? No deviation occurred in this quarter.

? Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Minor Source Modification No. 089-18431-00090. The operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Permit Modification No. 089-17252-00090.

Appendix A: Emission Calculations
PM and PM10 Emissions
From the Pangborn Blast Machine (#1 Blast)

Company Name: Munster Steel Co., Inc.
Address: 9505 Calumet Ave., Munster, IN 46321
MSM: 089-18431-00090
Reviewer: ERG/YC
Date: December 2, 2003

Type of Abrasive Used: Black Beauty

Unit ID	Max. Abrasive Usage (lbs/hr)	*PM Emission Factor (lbs/lbs)	Potential PM (lbs/hr)	Potential PM (ton/yr)	*PM10 Emission Factor (lbs/lbs PM)	Potential PM10 (lbs/hr)	Potential PM10 (ton/yr)	Control Device	Control Efficiency	PTE of PM (lbs/hr)	PTE of PM (ton/yr)	PTE of PM10 (lbs/hr)	PTE of PM10 (ton/yr)
#1 Blast	120,000	0.01	1200.0	5256.0	0.70	840.0	3679.2	Dust Collector	99.9%	1.20	5.26	0.84	3.68
Total				**5256.0**			**3679.2**				**5.26**		**3.68**

* The emission factors are from grit blasting from Air Quality Permits, Vol.1, Section 3 "Abrasive Blasting" (1991 Edition) by Stappa Alapco.

Methodology
PTE = Potential to Emit

Potential PM (lbs/hr) = Max. Abrasive Usage (lbs/hr) x PM Emission Factor (lbs/lbs)
Potential PM (tons/yr) = Max. Abrasive Usage (lbs/hr) x PM Emission Factor (lbs/lbs) x 8760 hr/yr x 1 ton/2000 lbs
Potential PM10 Emissions = Potential PM Emissions x PM10 Emission Factor
Potential to Emit = Potential Emissions x (1 - Control Efficiency)

Appendix A: Emission Calculations

PM/PM10 and HAP Emissions
From the Peddinghaus Plasma/Oxy-fuel Drill Machine (#3 OFD)

Company Name: Munster Steel Co., Inc.
Address: 9505 Calumet Ave., Munster, IN 46321
MSM: 089-18431-00090
Reviewer: ERG/YC
Date: December 2, 2003

FLAME CUTTING	Number of Stations	Max. Metal Thickness Cut (in.)	Max. Metal Cutting Rate (in./minute)	EMISSION FACTORS* (lb pollutant/1,000 inches cut, 1" thick)**				EMISSIONS (lbs/hr)				Total HAPS (lbs/hr)
				PM=PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
Oxyacetylene	1	2.0	600	0.1622	0.0005	0.0001	0.0003	11.68	0.04	0.01	0.02	0.065
Oxymethane	1	2.0	600	0.0815	0.0002		0.0002	5.87	0.01	0	0.01	0.029
Plasma*	1	2.0	600	0.0039				0.281	0	0	0	0.000

EMISSION TOTALS - Worst Case	PM = PM10	Mn	Ni	Cr	Total HAPS
Potential Emissions (lbs/hr)	11.7	0.04	0.01	0.02	0.06
Potential Emissions (lbs/day)	280.3	0.86	0.17	0.52	1.56
Potential Emissions (tons/year)	**51.2**	**0.16**	**0.03**	**0.09**	**0.28**
Potential to Emit (lbs/hr) after Baghouse Control	0.01	3.6E-05	7.2E-06	2.2E-05	6.5E-05
Potential to Emit (tons/year)	**0.05**	**1.6E-04**	**3.2E-05**	**9.5E-05**	**2.8E-04**

*Emission Factor for plasma cutting from American Welding Society (AWS). Trials reported for wet cutting of 8 mm thick mild steel with 3.5 m/min cutting speed (at 0.2 g/min emitted). Therefore, the emission factor for plasma cutting is for 8 mm thick mild steel.
Using AWS average values: (0.25 g/min)/(3.6 m/min) x (0.0022 lb/g)/(39.37 in./m) x (1,000 in.) = 0.0039 lb/1,000 in. cut, 8 mm thick.

METHODOLOGY

Cutting emissions (lb/hr) = (# of stations) x (max. metal thickness, in.) x (max. cutting rate, in./min.) x (60 min./hr.) x (emission factor, lb. pollutant/1,000 in. cut, 1" thick)
Plasma cutting emissions (lb/hr) = (# of stations) x (max. cutting rate, in./min.) x (60 min./hr.) x (emission factor, lb. pollutant/1,000 in. cut, 8 mm thick)
Potential Emissions (lbs/hr) = Worst Case scenario within different cutting methods.
Potential Emissions (lbs/day) = emissions (lbs/hr) x 24 hrs/day
Potentail Emissions (tons/yr) = emissions (lb/hr) x 8,760 hrs/year x 1 ton/2,000 lbs.
Potential to Emit (lbs/hr) = Potential Emissions (lbs/hr) x (1-99.9%)
Potential to Emit (tons/yr) = Potential Emissions (lbs/hr) x 8760 hr/yr x 1 ton/2000 lbs x (1-99.9%)